

**REVIEW OF CANCER INCIDENCE IN THE CYPRESS
CREEK AREA,
SHELBY COUNTY, TENNESSEE**

**A REVIEW AND ANALYSIS OF TENNESSEE CANCER
REGISTRY DATA, 1991-2000**

FOR

**CENSUS TRACTS 7, 9, AND 10
AND SHELBY COUNTY**



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**Epidemiology Program
Memphis and Shelby County Health Department**
In cooperation with
Tennessee Cancer Registry
Tennessee Department of Health

EXECUTIVE SUMMARY

This review investigated possible cancer excess in the Cypress Creek community using Tennessee Cancer Registry (TCR) data from 1991-2000. This review was conducted in response to the detection of environmental contamination, specifically dieldrin, in soil along Cypress Creek. Also, community residents showed concern for increased cancer risk due to possible exposure to the chemicals. The review analyzed six cancers for a potential excess. The cancers reviewed were: breast, pancreas, endometrial, rectal, prostate, and testicular cancers.

The Memphis and Shelby County Health Department employed a standardized incidence ratio design to compare incidence of six cancers in the focus area (1991-2000) with incidence of the same cancers in Shelby County, TN. Using age-adjusted cancer rates we estimated cancer rates for both the focus area and Shelby County to determine if there was any increase rate of cancer.

Among white females in the focus area, the observed breast cancers were statistically higher than expected as compared to Shelby County. Also, in African-American females, the age-adjusted incidence rate for pancreatic cancer was statistically higher than Shelby County.

These results suggest that there is an excess of breast cancer among white females and pancreatic cancer among African-American females. However, since breast cancer is the most common cancer in the focus area and in Shelby County, the increase of breast cancer among white females may be artificial since the white female population in the focus area is so small. Overall, pancreatic cancer is the 5th leading cancer in the focus area population, whereas it is the 7th leading cancer in Shelby County, which may suggest that further information is needed to determine why the age-adjusted incidence rate in the focus area is higher.

INTRODUCTION

The Memphis and Shelby County Health Department (MSCHD) conducted this review due to the detection of environmental contaminants in the soil along Cypress Creek in Memphis, TN. Sampling conducted by the Memphis Environmental Center, Inc., Memphis, TN, detected levels of organochlorines, specifically dieldrin, around Cypress Creek that exceed the Environmental Protection Agency's (EPA) target levels for chronic exposure.^{3,6} Residents in the Cypress Creek community have expressed concern about the risk of developing cancer in their neighborhood due to possible long-term exposure to organochlorines.

Although the International Agency for Research on Cancer (IARC) has determined that dieldrin is not classifiable as to its carcinogenicity to humans, the EPA has determined that dieldrin is a probable human carcinogen based on studies in animals.¹² A scientific literature review revealed several studies that have examined associations between organochlorines and the following types of cancers: breast, endometrial, testicular, prostate, rectal, and pancreatic. Although the literature does not document a causal relationship between dieldrin and these cancers, all cancers evaluated in the scientific literature review for a suspected association with organochlorines was included in this analysis. The goal of this review was to examine cancer incidence rates for specific types of cancers in the Cypress Creek area, compared to expected rates based on Shelby County cancer incidence. This review is not intended to present or establish a causal relationship or association between dieldrin and cancer in the focus area. In addition to reviewing cancer incidence rates, an analysis of common cancer types in the focus area was also performed.

HISTORY

Cypress Creek is a tributary of the Wolf River in Shelby County, Tennessee. The creek extends east of the Wolf River for approximately 7.5 miles. In the late 1940's, during the development of the residential community surrounding Cypress Creek, industrial facilities, producing pesticides and other chemicals, were established. These facilities discharged wastewater into the creek until the early 1960's. Residential development along the creek was almost completed by the mid-1950's. In the late 1950's the creek was channeled for approximately 5.8 miles, by dredging the soils and replacing with cement.⁵ The excavated soils were placed along the banks of the creek within the residential neighborhoods. Historical information pertaining to the creek's original path is unknown. As well, the extent of contamination of the soils from the creek is unknown, since industrial discharge into the creek was not collected prior to EPA regulations. Information related to exact location of dredged soils within the neighboring community is also unknown.

METHODS

Review Time Period and Case Definition

Cancer incidence data were obtained for the ten-year period of 1991 – 2000 from the Tennessee Cancer Registry. These are the most recent cancer data that are available by census tract levels. Incidence data from 1998 – 2000 are provisional data (not yet validated), but have been included in this analysis. Cancer *incidence* was chosen for this review, instead of cancer *mortality* (death), since cancer *mortality* rates may be confounded by how advanced the cancer was at the time of diagnosis, access to health care, and other factors not related to any potential environmental exposure. Environmental sampling data indicated that the main contaminant of concern was dieldrin; therefore MSCHD reviewed those cancers suspected to have an association with this type of organochlorine.

A “case” was defined as an individual diagnosed with cancer at one of the following sites: breast, corpus uteri (endometrial), testis, prostate, rectum and rectosigmoid (rectal), and pancreas, from January 1, 1991 through December 31, 2000, and who resided in the focus area at the time of diagnosis. Geographic Information Systems (GIS) was used to accurately identify the correct geographic location of cases used in this review. The focus area is located in the north central area of Shelby County, along Cypress Creek between Evergreen Street and Jackson Avenue, specifically census tracts 7, 9 and 10 (see Figure A). Demographic characteristics such as age at diagnosis, race, and gender were used in the analysis.

The cancers selected for this analysis were chosen based upon published scientific literature. All cancers that were examined in the literature for a suspected association with organochlorine exposure were included in this analysis.^{2,4,8,9,13,14} The cancers identified are: breast cancer, endometrial cancer, pancreatic cancer, prostate cancer, rectal cancer, and testicular cancer.

Data Analysis

All cancer incidence data were analyzed by MSCHD using the following software: SAS, Excel and ArcGIS 8.3 software. In order to compare the cancer incidence data around Cypress Creek with County cancer incidence data, it is necessary to have specific population data. Population data, categorized by age, and health outcome data are available at the census tract level. Census tract level data is being used for this review to give a more accurate picture of cancer incidence in Cypress Creek. In order to evaluate whether the focus area, Cypress Creek, has an elevated incidence of cancer, an appropriate comparison population was chosen. In general, a comparison population should be large enough so that its cancer rates are stable (that is, the rates do not fluctuate greatly). Further, a comparison population should be small enough so that it is similar to the population being studied in factors that affect disease rates over time such as socioeconomic factors and racial distribution. For the calculation of standardized incidence ratio (SIRs), Shelby County was chosen as the more appropriate comparison population for this analysis.

Studies show that different groups of people have different rates of developing cancer; therefore, cancer incidence was calculated separately by age group (5-year), gender, and race. For example, as we get older, our chance of developing cancer increases, therefore, an older population would be expected to have a higher rate of cancer than a younger population. In making our comparisons, the number of cancers for a certain age group is compared to the number of cancers expected for that age group.

Once the age-specific rates are calculated for each age group, gender, and race, the standard incidence ratio (SIR) is calculated. The SIR estimates the occurrence of cancer in a focus area population (in this case, Census Tracts 7, 9, and 10 combined) relative to what might be expected if the census tract had the same cancer rate as the comparison population (Shelby County). Specifically, a SIR is the ratio of the actual number of cases observed to the expected number of cases.

The SIR tells us how much higher or lower is the census tract's cancer rate compared to the comparison population. If the observed number of cases equals the expected number of cases, the SIR will equal one. If more cases occurred than one would expect, then the SIR will be greater than one. If fewer cases were diagnosed than expected, then the SIR will be less than one. For example, if 10 cases are observed in the focus area population, but 5 cases were expected, then the $SIR = 10/5 = 2$ and the area has 2 times the cancer rate than expected, but if 20 cases were expected, then the $SIR = 10/20 = 0.5$, and the area has half the rate expected.

To help interpret the SIR, the statistical significance of the difference was calculated using chi-square. In other words, the number of observed cases were determined to be either significantly different from the expected number of cases, or different due to chance alone. "Statistical significance" for this review means that there is less than a 5 percent chance ($p\text{-value} < 0.05$) that the observed difference is merely the result of random fluctuation in the number of observed cancer cases. If the SIR is found to be statistically significant, then the difference between the expected and observed cases is probably due to some factor or factors, not just chance alone.

Standardized incidence ratios (SIRs) were calculated for each type of cancer (breast, corpus uteri (endometrial), testis, prostate, rectum and rectosigmoid (rectal), and pancreas) when six (6) or more cases were observed in the census tract within the 10-year period. Calculating SIRs with fewer cases leads to statistical instability. The census tract population and rate calculations were based on the 1990 and 2000 U.S. Census population data, estimating for the years between the census surveys. The county population and rate calculations were also based on 1990 and 2000 data, estimating for the years between census surveys. Table 1 summarizes these results.

Since cancer rates tend to vary with age, and since populations vary with respect to their age distribution, incidence rates are age-adjusted to allow comparison of rates between different populations (i.e., regional boundaries). Age-adjustment allows rates to be compared between population groups with different age distributions. Age-adjusted rates are calculated by the direct method, using the age distribution of the 2000 United States standard population. Under the direct method of age adjusting, the population is first divided into 18 reasonably homogeneous age groups of five-year

intervals (i.e. 0-4,5-9, etc.). The age-specific rate is calculated for each five-year age group; then, each age-specific rate was weighted by multiplying it by the proportion of a standard population of the respective age group. Lastly, the weighted age-specific rates are summed, giving the resulting age-adjusted rate. Rates are calculated separately for males, females, and the total population using identical weights. All age-adjusted rates are expressed as events per 100,000 individuals per year.⁷

Age-adjusted incidence rates (AAIR) for specific geographic areas (i.e., regions) may be compared to determine whether differences exist between the areas. It is important to note that rates based upon small numbers of events for a given period of time or for a sparsely populated geographic area must be viewed with caution. A small number of events result in considerable random variation in the rate estimate, thus limiting their usefulness. Therefore, if the number of cancer events (new) is five or fewer, then the calculated rate is considered unstable. Testing for differences between two rates (i.e., the county's rate and the focus area rate) can be performed by comparing 95 percent confidence intervals for each population. Rates are considered statistically different if the two 95 percent confidence intervals do not overlap.⁷

DISCUSSION

Census Data

The total population for the focus area is 9,875 persons; according to the 2000 census data.¹⁰ Table 1, in the Appendix, summarizes the 2000 United States Census information for Tennessee, Shelby County, and the focus area. Review of the census data suggests that Census Tracts 7,9, and 10 have a higher percentage of African Americans than the State or County as a whole (91.6%, 16.4%, and 48.6% respectively). There are 3952 households out of which 34.0% have children under the age of 18 living with them, 16.7% are married couples living together, 5.2% have a male householder with no wife present, and 45.6% are non-families. 31.2% of all households are made up of individuals and 9.9% have someone living alone who is 65 years of age or older. The average household size is 2.49 and the average family size is 3.2.

The focus area population is spread out with 23.2% under the age of 15, 14.6% from 15 to 24, 27.1% from 25 to 44, 21.2% from 45 to 64, and 13.9% who are 65 years of age or older. The median age is 34.8 years. For every 100 females there are 82.6 males. The median income for a household in the focus area is \$18,017, and the per capita income is \$11,828. Males have a median income of \$36,719 versus \$25,192 for females. 9.2% of the population and 3.9% of families are below the poverty line. Out of the total people living in poverty, 11.5% are under the age of 18 and 4.4% are 65 or older.^{10,11}

Cancer Data

As shown in Table 2, the data analysis indicates that only in incidence of breast cancer among white females, the observed cancers (n=10) were statistically higher than what was expected (n=4.47), as compared to Shelby County for 1991-2000 (SIR = 2.24, p-value = 0.009). At all other cancer sites and for other race and gender categories analyzed, the incidence of cancer was not statistically greater than what is expected to

occur, as compared to the cancer incidence in Shelby County for 1991-2000. Other SIR's were reported as greater than 1, however, the p-value, was greater than 0.05. This indicated that the suspected increase in cancer cases might be due to random fluctuation. SIR's were not reported for the following cancers and subgroups: pancreas – black males; corpus uteri – white females; rectal and rectosigmoid – black males and white females; testicular – all males and white males; and prostate – white males. The cancer incidences in reported cases were fewer than 6 and are considered unstable. In addition, incidences less than 6 are not reported due to patient confidentiality concerns.

Table 3, displays a summary of age adjusted cancer incidence rates (AAIR) for Tennessee, Shelby County and the focus area (Census Tracts 7, 9, and 10 combined). When comparing the age-adjusted incidence rates of the focus area (Census Tracts 7, 9, and 10 combined) to Shelby County, it was observed that only the age-adjusted rate of pancreatic cancer in black females (n=12) in the focus area (AAIR = 20.1/100,000, 95% C.I. = 17.2-23.0) was statistically higher than that of black females in Shelby County (AAIR = 12.8/100,000, 95% C.I. = 11.2-14.4). Rates for all other cancer sites, race and gender categories analyzed were not statically higher or lower than the age-adjusted rates for Shelby County. Where AAIR in the focus area population are indicated higher or lower than the County, the confidence intervals for these cancers overlapped. Therefore, the AAIR in the focus area population were not significantly higher or lower than Shelby County, 1991-2000. Age-adjusted incidence rates were not analyzed for white females and white males due to small 10-year population size (4,045 and 4,717 respectively). AAIR's were not reported if cancer incidence in reported cases were fewer than 6 and/or population less than 10,000, as they are considered unstable. AAIR's are also not reported where the number of reported cases is less than 6 due to patient confidentiality concerns.

Review of the cancer incidence data indicated that the five (5) most common cancers diagnosed in the population were prostate (28%), lung and bronchus (24%), colon and rectal combined (11%), other (5%) and stomach (5%) for men. The five (5) most common cancers for women in the focus area population were breast (31%), lung and bronchus (16%), colon and rectal combined (8%), corpus uteri (5%), and pancreas (5%). These common cancers were fairly consistent with the five (5) most common cancers for the county: prostate (25%), lung and bronchus (21%), colon and rectal combined (9%), bladder (6%) and other (6%) for men; and breast (32%), lung and bronchus (13%), colon and rectal combined (10%), other (5%) and corpus uteri (5%) for women. (Table 4a. and Table 4b.)

CONCLUSION

Review of the census data suggests that Census Tracts 7, 9, and 10, the Cypress Creek focus area, has a higher percentage of African-Americans, and a lower percentage of whites than Shelby County and Tennessee. The focus area population also has a lower per capita and median household income than the county and the state.

In Census Tracts 7, 9, and 10 from 1991-2000, the observed number of cancers was statistically higher than what was expected as compared with Shelby County incidence

rates in white females for breast cancer. All other sub-groups and cancers analyzed did not indicate a statistical difference from the expected incidence rates for the focus area, as compared to Shelby County.

Also, in the focus area, the age-adjusted incidence rate of pancreatic cancer in black females is statistically higher than that of Shelby County, from 1991-2000. All other cancers, gender and race categories analyzed in Census Tracts 7, 9, and 10 combined, indicated that the AAIR was not significantly higher or lower than the AAIR's of Shelby County.

The analysis of the most common cancers indicates that breast cancer is the leading type of cancer for all females in both the focus area and Shelby County, accounting for 31% and 32%, respectively, of all cancers in women. The observed excess of breast cancer in white females, above what is expected for breast cancer in white females, may be artificial since breast cancer is the most common type of cancer in both the focus and control areas. Although pancreatic cancer is the 5th leading cancer in the focus area population, it is not one of the top five (5) cancers in Shelby County, accounting for 5% and 3%, respectively, of all cancers in women. Also, nationally pancreatic cancer accounts for 2%, 9th overall, of all cancers in women.¹

RECOMMENDATIONS

The information in this cancer incidence review should be presented to the Cypress Creek Community and any other interested parties by the Memphis and Shelby County Health Department (MSCHD). Also, fact sheets specifically for the Cypress Creek Community should be developed to address community concerns about cancer.

The review should be used only as an examination of the cancer incidence rates in the Cypress Creek Community. It is not intended to demonstrate associations or causality between cancer incidence and organochlorine (dieldrin) exposure. An examination of cancer incidence rates should be conducted on a routine basis, possibly every five years. A health consultation conducted by the State of Tennessee is one possible future course of action to address the relationship between any potential environmental exposure and adverse health outcomes.

MSCHD should coordinate with the Tennessee Department of Health to further review any additional health information (hospital discharge, birth defects, etc.) for the focus area, as it becomes available, to address environmental public health concerns. Lastly, a review of cancer mortality data should be conducted to identify those cancers that adversely affect the focus area population.

LIMITATIONS

Cancer incidence data provided by the Tennessee Cancer Registry is only 80% complete; therefore some incidence of cancer may not have been captured due to this data gap. Also, from those cases that were geo-coded, 6% of the data was unable to be geographically matched to the spatial file, which excluded those cases from the

analyses. Some reasons for the cases being “un-matched” were: use of post office boxes for patient address, incorrect and/or incomplete physical address, and unknown facility name used instead of physical address.

In addition to the limitations previously mentioned, past residents diagnosed with cancer after relocating outside of the focus areas were not captured in this review. Likewise those persons relocating to the community and diagnosed with cancer between 1991 and 2000 were included in the review.

Another important limitation to note is the small population size of the focus area. In many instances the focus area population was too small to analyze cancer incidence, especially for white females and white males. This is especially true for age-adjusted rates, since rates based on large numbers provide a more stable estimate of the true underlying rate. As well, rates based on small numbers may fluctuate dramatically from year to year or differ considerably from one small place to another small place, even when there is no meaningful difference. Small numbers also raise statistical issues concerning the accuracy, and thus usefulness, of the data.

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APPENDIX

Figure A. Cypress Creek Focus Area

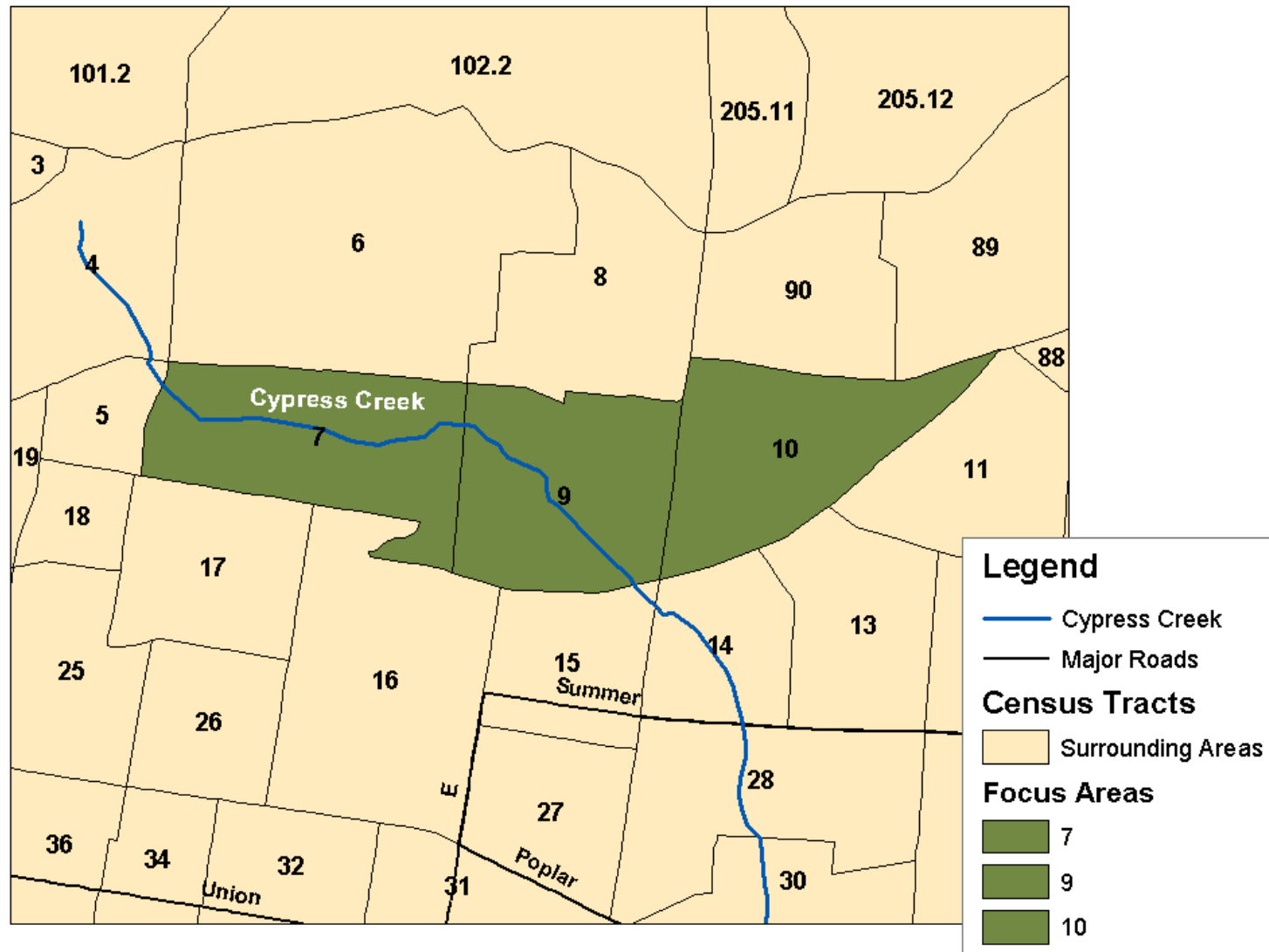


Table 1. 2000 Population Demographic Data by Tennessee, Shelby County, and Census Tracts 7,9, and 10 Combined.

	TENNESSEE	SHELBY COUNTY	CENSUS TRACTS 7,9 AND 10
Population	Population (%)	Population (%)	Population (%)
All Persons	5,689,283 (100)	897,472 (100)	9,875 (100)
Black	932,809 (16.4)	435,824 (48.6)	9,042 (91.6)
White	4,456,310 (80.2)	424,834 (47.3)	683 (6.9)
Other	193,164 (3.4)	36,814 (4.1)	150 (1.5)
Gender	Population (%)	Population (%)	Population (%)
Male	2,770,275 (48.7)	428,645 (47.8)	4,475 (45.3)
Female	2,919,008 (51.3)	468,827 (52.2)	5,400 (54.7)
Age Group	Population (%)	Population (%)	Population (%)
<5 Years	374,880 (6.6)	68,427 (7.6)	705 (7.1)
5-14 Years	790,968 (13.9)	144,354 (16.1)	1,592 (16.1)
15-24 Years	781,529 (13.7)	127,761 (14.2)	1,444 (14.6)
25-44 Years	1,718,428 (30.2)	278,882 (31.1)	2,670 (27.1)
45-64 Years	1,320,167 (23.2)	188,467 (21.0)	2,089 (21.2)
>64 Years	703,311 (12.3)	89,581 (10.0)	1,375 (13.9)
Median Age	35.9	32.9	34.8
Number of Families	1,547,835	228,644	2,460
Number of Households	2,232,905	338,366	3,952
Income	\$	\$	\$
Median Household	36,360	39,593	18,017
Per Capita	19,393	20,856	11,828
Median Year Housing Built	1976	1972	1954

Source: 2000 U.S. Census^{10,11}

Table 2. Summary of SIR calculations for focus area (Census Tracts 7, 9, and 10), in Memphis, TN as compared with Shelby County, 1991-2000.

CANCER TYPE	OBSERVED CASES^a	EXPECTED CASES^a	SIR	p-value^b
All Cancers, Both Races and Genders	459	429.27	1.07	0.15
All Cancers, Black Females	229	207.53	1.10	0.14
All Cancers, Black Males	191	193.84	0.99	0.84
All Cancers, White Females	23	15.27	1.51	0.05
All Cancers, White Males	16	12.63	1.27	0.34
Pancreas, Both Races and Genders	15	13.31	1.13	0.64
Pancreas, Black Females	12	8.02	1.50	0.16
Pancreas, White Females	0	0.38	0	0.54
Pancreas, White Males	0	0.31	0	0.58
Corpus Uteri, Both Races, Females	--	--	1.26	0.40
Corpus Uteri, Black Females	11	9.57	1.15	0.65
Rectum and Rectosigmoid, Both Races and Genders	--	--	0.88	0.66
Rectum and Rectosigmoid, Black Females	6	7.23	0.83	0.65
Rectum and Rectosigmoid, White Males	0	0.40	0	0.53
Breast, Both Races, Females	76	61.02	1.25	0.06
Breast, Black Females	66	56.55	1.17	0.21
Breast, White Females	10	4.47	2.24	0.01
Testicular, Black Males	0	0.23	0	0.64
Prostate, Both Races, Male	--	--	0.90	0.43
Prostate, Black Males	57	61.60	0.93	0.56

Source: Tennessee Cancer Registry. Data are approximately 80% complete. Interpret with caution.

^a Counts and expected cases are suppressed where fewer than six (6) cases were reported, -- indicates number of cases suppressed, however SIR was still calculated because more than five (5) cases were reported.

^b Statistically significant, $\alpha = 0.05$

Table 3. Age-Adjusted Cancer Incidence Rates^a by Census Tracts 7,9, and 10 Combined, Shelby County, and Tennessee.

SITE	TENNESSEE^b AAIR (95% Conf. Int.)	SHELBY COUNTY^c AAIR (95% Conf. Int.)	CENSUS TRACTS 7, 9, & 10 COMBINED^{c,d} AAIR (95% Conf. Int.)
Black Females			
All Sites	348.1 (338.8 to 357.3)	341.3 (310.0 to 372.5)	387.9 (349.2 to 426.7)
Pancreas	10.7 (9.0 to 12.3)	12.8 (11.17 to 14.4)	20.1 (17.2 to 23.0)
Corpus Uteri	14.6 (12.7 to 16.5)	15.0 (13.0 to 17.0)	17.1 (14.3 to 19.9)
Rectum and Rectosigmoid	10.2 (8.6 to 11.8)	11.5 (10.3 to 12.7)	8.6 (6.6 to 10.7)
Breast	104.5 (99.4 to 109.5)	98.0 (88.9 to 107.1)	115.7 (102.7 to 128.7)
Black Males			
All Sites	548.9 (533.9 to 563.8)	489.3 (435.1 to 543.5)	497.1 (443.7 to 550.5)
Pancreas	13.6 (11.2 to 15.9)	12.3 (10.8 to 13.9)	--
Rectum and Rectosigmoid	16.2 (13.6 to 18.7)	14.1 (12.6 to 15.7)	--
Testicular	1.0 (0.5 to 1.5)	0.5 (0.05 to 0.6)	0 (0 to 0)
Prostate	173.7 (165.1 to 182.2)	155.7 (134.9 to 176.5)	149.9 (127.82 to 172.0)
White Females			
All Sites	348.4 (344.9 to 351.9)	360.1 (326.8 to 393.4)	--
Pancreas	5.9 (5.5 to 6.4)	7.4 (6.5 to 8.4)	--
Corpus Uteri	17.7 (16.9 to 18.4)	18.9 (16.7 to 21.0)	--
Rectum and Rectosigmoid	9.2 (8.6 to 9.8)	10.4 (9.1 to 11.6)	--
Breast	117.0 (115.0 to 119.1)	123.8 (111.9 to 135.7)	--
White Males			
All Sites	454.7 (450.1 to 459.4)	445.9 (393.4 to 498.4)	--
Pancreas	9.6 (8.9 to 10.3)	10.2 (8.9 to 11.5)	--
Rectum and Rectosigmoid	16.7 (15.8 to 17.6)	15.4 (13.6 to 17.1)	--
Testicular	4.9 (4.5 to 5.4)	4.2 (3.5 to 4.8)	--
Prostate	102.3 (100.1 to 104.4)	107.9 (92.0 to 123.8)	--

Source: Tennessee Cancer Registry. Data are approximately 80% complete. Interpret with caution.

^a Rates are per 100,000 and are age-adjusted using the 2000 U.S. population standard.

^b Rates are calculated using 1997-2000 cancer incidence and population data.

^c Rates are calculated using 1991-2000 cancer incidence and population data.

^d AAIR are suppressed where fewer than six (6) cases were reported and/or population less than 10,000, because these numbers are considered unstable; -- indicates rates were suppressed.

Table 4a. The five most common cancers diagnosed (incidence) in men and women in Census Tracts 7, 9 and 10 Combined, 1991-2000.

Men		Women	
Prostate	28%	Breast	31%
Lung	24%	Lung	16%
Colon/Rectum	11%	Colon/Rectum	8%
Other	5%	Endometrial	5%
Stomach	5%	Pancreas	5%

Source: Tennessee Cancer Registry. Data are approximately 80% complete. Interpret with caution.

Table 4b. The five most common cancers diagnosed (incidence) in men and women in Shelby County, 1991-2000.

Men		Women	
Prostate	25%	Breast	32%
Lung	21%	Lung	13%
Colon/Rectum	9%	Colon/Rectum	10%
Bladder	6%	Other	5%
Other	6%	Endometrial	5%

Source: Tennessee Cancer Registry. Data are approximately 80% complete. Interpret with caution.